DOCUMENT RESUME

ED 348 003 IR 015 740

AUTHOR Kester, Diane D.
TITLE Modeling the School System Adoption Process for Library Networking.
PUB DATE Feb 92
NOTE 11p.; In: Proceedings of Selected Research and Development Presentations at the Convention of the Association for Educational Communications and Technology and Sponsored by the Research and Theory Division; see IR 015 706. For the complete report, see ED 326 238.
PUB TYPE Viewpoints (Opinion/Position Papers, Essays, etc.) (120) -- Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Adoption (Ideas); *Change Strategies; Elementary Secondary Education; Guidelines; Learning Resources Centers; *Library Networks; Library Planning; *Models; Questionnaires; School Districts; School Libraries; School Surveys; Shared Resources and Services

ABSTRACT

This study developed a preliminary model of the stages of school system participation in library networks and identified the major activities for each stage. Constructed from a study of the literature on innovation adoption and diffusion, observation, and informal interviews, the model is composed of four primary aspects: technological support, financial support, human support, and activities and applications. Within each aspect, anticipated events in each of the three stages of participation in a network are identified. The population for the study included school systems in one or more of three types of networks: OCLC vendors, state regional multitype networks, and statewide school networks. A questionnaire based on the preliminary stage model was mailed to a random sample of 674 school systems in 17 states; usable responses were received from 362 school districts in 13 states. Descriptive statistics were used to provide a profile of the respondents by state, type of network, position of respondent, size of school district, school type, and level of involvement in a network. Chi-square and gamma coefficient tests were performed on each variable in the questionnaire in relation to the level of involvement reported by the respondents, and 16 of the 19 variables in the model tested significant. When analyzed by type of network (school vs. OCLC), 11 events tested as significant. Research support for the general activities leads to the conclusion that this model can serve as a guide to understanding the process and provides a pattern for other school systems to follow as they explore resource sharing. It is noted that events in each phase will differ depending on local support, and that movement will be a gradual transition as schools move into a shared resources environment. (2 references) (BBM)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it

☐ Minor changes have been made to improve reproduction quality

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

ED348003

Title:

Modeling the School System Adoption Process for Library Networking

Author:

Diane D. Kester

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Michael Simonson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

120157940

The successful inclusion of school library media centers in fully articulated networks involves considerable planning and organization for technological change. No model to assist school systems in the decision-adoption process previously existed in the literature. In this study a preliminary model of the stages of school system participation in library networks was developed with the major activities for each stage identified. The model follows the stages in the innovation adoption and diffusion literature and is constructed from the study of the literature, observation, and informal interviews. The model is composed of four primary aspects: technological support, financial support, human support, and activities and applications. Within each aspect, anticipated events in each of the three stages of participation in a network are identified.

The population for the study included school systems in one or more of three types of networks: OCLC vendors, state regional multitype networks, and state-wide school networks. A random sample of 674 school systems in 17 states with 3,613 school systems was drawn. A questionnaire based on the preliminary stage model was mailed to district level persons responsible for school media programs, school contact persons for the library network, superintendents, or building school library media specialists. Usable responses were received from 362 school systems in 13 states.

Descriptive statistics were used to provide a profile of the respondents by state, type of network, position of respondent, size of school district, school type, and level of involvement. Profiles by the reported level of involvement in a network were done by state and size of the school district. Chi-square and gamma coefficient tests were performed on each variable in the questionnaire in relation to the level of involvement reported by the respondent. Sixteen of the nineteen variables in the model tested significant. When analyzed by type of network (school vs OCLC) 11 events tested as significant; however, when analyzed by position of the respondent, size of the school system, and years in a network few events tested significantly different under the additional parameters. As do other models, this one provides a guide for users to assess their own progress in adoption of an innovation and to plan for positive action.

SCHOOL NETWORKING INNOVATION MODEL

	Phase I	Phase II	Phase III
	TECHNOLOGICAL SUPPORT		
* Micro-computers	Some evidence of use of computers	Periodic use of computers	Regular use of computers
* Tele-communi-cations	No modem in school	No modem in media center	Modem in media center
* Tele-phone	No telephone in media center	Efforts to obtain telephone	Telephone in media center
	FINANCIAL SUPPORT		
Inter-library Loan	None budgeted for ILL	Requests for ILL budget	ILL costs in budget
Network dues	None budgeted for dues	Special funds used for dues	Network fees and dues in budget
* Network activities	None for networking activities	Special funds for network activities	Communi-cation expenses in budget

HUMAN SUPPORT			
* Meetings	Informal meetings	Formal meetings	Organization formed
Inter-library loan	Casual requests for ILL	Centralized requests for ILL	Individual requests for ILL
* Policies	Informal agreements	Preliminary policies being formed	Written policies
* External resources	Awareness of external resources	Investigation of external resources	Use of external resources
* Staff	No additions	Requests for staff made	Staff added
* System level support	Little support Formal meetings	Media services position at system level	Consulting services by network
ACTIVITIES AND APPLICATIONS			
* Serials	Exchange lists of serials	Union list of serials	Union catalog of serials
* Special collections	Exchange lists of special collections	Union list of special collections	Union catalog of special collections
* Collection development	Awareness of cooperative collection development	Exploration of cooperative collection development	Cooperative collection development

*	Cooperative technical services	Awareness of cooperative technical services	Exploration of cooperative technical services	Technical services cooperation
*	Delivery methods	Awareness of material delivery methods	Investigation of material delivery methods	Use of material delivery system
	Teach use of external resources	Awareness of external resources in reference skills instruction	Use of union lists taught in reference skills instruction	Regular use of external resources by students

* significant for $p<.05$

(Kester, 1990, 72-74, 124)

The model serves as a guide to understanding the process and also provides a pattern for other school systems to follow as they explore resource sharing. Events in each phase will differ depending upon local support, but the research supports the general activities. Movement will not be in distinct steps but will be a gradual transition as schools move into a shared resources environment.

PHASE ONE

TECHNOLOGICAL SUPPORT. In the area of technology, the media coordinator is exploring the use of a microcomputer. He or she may need to go to the computer lab to use a machine, but at least one application package is being used for library management. Examples might be a graphics production program such as *Print Shop* or a word processing program for letter writing. There is no telephone in the media center. A call other libraries or vendors, necessitates leaving the media center and walking to the office or teacher's phone.

FINANCIAL SUPPORT. Funding support for resource sharing is non-existent. There is no budget appropriated for sending materials to another library - or even for returning borrowed 16 mm films. Money from school fund raisers (book fairs, school pictures, sales) is used for

mailing and photocopying is hopefully absorbed in the consumable materials budget.

HUMAN SUPPORT. Every community has more than one type of library. In Phase One the school media professionals meet with each other but rarely meet with librarians from other types of libraries in the community. Requests for borrowing from other libraries are casual and infrequent. There is no formal interlibrary loan agreement.

School media specialists are aware of external resources. They attend meetings, read professional journals, and have all read *Information Power* with the challenge "To participate in networks that enhance access to resources located outside the school" (AASL, 1988, 12). However, during Phase One of the School Networking Innovation Model, there is no concerted effort at the system level to support cooperative activities.

ACTIVITIES AND APPLICATIONS. In the fourth area, evidence of sharing is just beginning. Lists of serial holdings may be exchanged between librarians. Awareness of holdings of other libraries is necessary before regular requests can be made. At this stage, the patron is either sent to the other library to read the article or possibly a phone call will result in a photo copy of the article being mailed to the school. Lists of other special collections may begin at this phase. Some schools develop strengths in certain subjects to support unique curricular offerings. During this phase media specialists are becoming aware of different material delivery methods. Most school systems have a couriers. Other methods of delivery include dropping materials off in a central location after school or commercial carrier services.

The transition into the next phase will be uneven, depending upon circumstances. School district funding for technology may show movement into phase two while the human factor lags behind. In some locations human networking may take place since funding is not a prerequisite to librarians meeting with librarians for mutual decisions to cooperate in certain activities.

PHASE TWO

TECHNOLOGICAL SUPPORT. During Phase Two, the media specialist is beginning to use the microcomputer periodically, probably in the media center. There is still no modem to use to connect to external resources; however, efforts to obtain a telephone line in the media center have increased. The awareness of emerging technologies has intensified into investigation of

services and prices. Terms such as retrospective conversion, MARC record, computer interface, DOS, print drivers, hard disk drives, laser printer, video overlay card, telefax, communications package, modem, DIALOG, Dow-Jones, FrEd Mail, WeatherLink, OCLC, CD-ROM drive, and video disc player creep into media specialists' talks with teachers and administrators.

FINANCIAL SUPPORT. Requests for budgeted support of interlibrary loan and resource sharing are beginning to appear in proposed budgets. Documentation to support the requests are prepared.

HUMAN SUPPORT. As schools move from Phase One into Phase Two, the informal meetings of local librarians are becoming regular with discussions on cooperative projects. Requests for interlibrary loan may be centralized and preliminary policies for resource sharing are being formed. A school system may request a system-level supervisor for media services, if such a position is not already established.

ACTIVITIES AND APPLICATIONS. The activities begun during Phase One, are expanded during the next phase. The lists of serials and/or special collections are combined into union lists. The concept of cooperative collection development expands as professionals from multi-type libraries discuss and plan purchases of periodicals and materials. The group may explore possibilities for centralized processing of materials, a savings in time and dollars.

At one time, networks considered only physical delivery of materials. The items had to be mailed, sent by commercial carrier, state courier, or sent through a local shuttle or courier service. Some libraries have set up a central location - the public library, for example. Someone assumes responsibility for picking up the items, often on the way to or from work. Methods of delivering interlibrary loan materials are explored during Phase Two. Students are taught to use the serials lists from other libraries.

The advantages of resource sharing and cooperative collection endeavors lead libraries into phase three. Again, movement is usually uneven. A system may be moving into phase three with technological support yet lag behind in cooperative activities with other types of libraries. Movement is influenced by opportunities that differ from community to community.

PHASE THREE

TECHNOLOGICAL SUPPORT. As schools move into Phase Three of the model, computers are used regularly for correspondence, sign creation, reports, and publications. The publications include periodic newsletters, bibliographies for instruction or recreation, and teaching materials. In addition, the computer has become a standard tool for library management: overdue notification, circulation records and reports, inventory of equipment, books, and audio-visual materials. The microcomputer has been often referred to as "another member of the media center staff."

The telephone and modem are used for online database searching, electronic mail services, and interlibrary loan requests. A telefax machine is used to send and receive interlibrary loan requests for periodical articles. Reference services are enhanced with the use of newer technologies such as CD-ROM encyclopedias and indexes. In addition to the word

FINANCIAL SUPPORT. A school system has moved into Phase Three when the costs of interlibrary loan activities are included in the budget for media services. The communication expenses and network fees are supported by the school system budget.

HUMAN SUPPORT. Local librarians are formally organized with written policies concerning interlibrary loan, cooperative endeavors, shared staff development programs, and the staff to accommodate a strong unified media services program. Casual requests for interlibrary loans have resulted in written policies for borrowing and loaning materials within the area. Concerns of teachers over "materials <u>they</u> ordered for <u>their</u> school" and of school administrators about "materials purchased with <u>school</u> money" (taxpayers' money) must be addressed in these policies. For school systems without media supervisors, the members of community librarian organizations become consultants, advisors, and moral supporters with the unified goal of providing information to the citizens of the community.

ACTIVITIES AND APPLICATIONS. The list of serials and collections has grown into a union catalog. It may take the form of a CD-ROM union catalog or an online catalog.

As the librarians in a community become more aware of the holdings of other libraries, purchasing decisions are for cooperative collection development. Library A will subscribe to *Journal Z* and Library B will subscribe to *Journal Y*. Neither is used frequently for pleasure reading but both are indexed in the standard periodical indexes. Library C will purchase *Reference Set W* and

Library D will purchase *Reference Set X*. In effect, these four libraries have quadrupled their buying power.

The expense of technical services, primarily processing new materials, may be shared. Whether a card catalog or an online catalog is used, if one site serves several libraries, overall costs decline. One suggestion is for a school system to hire a paraprofessional to work in the technical services department at the public library. Receiving orders, verifying invoices, cataloging, and preparing materials for circulation is done at the site. For media specialists this shifts time spent on things to time spent with people, service.

To move materials from library to patron requires one or more delivery systems. As the availability of telefax machines increases, copies of articles in journals and/or reference books are transmitted quickly. Within a local community, the only cost is the phone line and the paper - and the time for workers to handle the request.

Students are taught to include external resources while working on term papers.

Four areas that influence resource sharing have been discussed: technology, funding, humans, and activities. These are not meant to exclude other areas, but they have been identified as essential. Research supports that these areas are indeed important to a school becoming a participating member of library networking.

RESOURCES

American Association of School Librarians and Association for Educational Communications and Technology. *Information Power: Guidelines for School Library Media Programs*. Chicago and Washington, DC: ALA and AECT, 1988.

Kester, Diane D. *Modeling the School System Adoption Process for Library Networking*. Dissertation from the University of North Carolina at Chapel Hill. Chapel Hill, 1990. Published by UMI.